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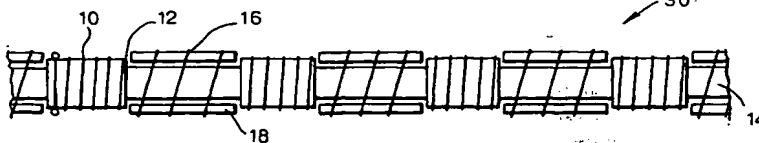
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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **OPTICAL FIBRE SENSOR ASSEMBLY**



(57) Abstract: An optical sensor assembly comprising a plurality of optical fibre sensor coils optically coupled by optical fibre; and an elongate support element, on which said plurality of optical fibre sensor coils and optically coupling optical fibre are mounted is disclosed. The support element has an elastic limit such that when said support element is bent away from the elongate axis, the optical fibre fracture limit is reached before the elastic limit is reached. An array of these optical sensor assemblies, the mandrel on which the sensing coils are mounted and their method of manufacture are also disclosed.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/00874

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01H9/00 G01V1/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01H G01V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 547 869 A (SAVIT CARL H) 15 October 1985 (1985-10-15) column 3, line 9 - column 4, line 31; figures 1-4	1,3,4, 6-9,11, 22-24, 27,28, 41,42, 52,53
A	US 4 910 715 A (SAVIT CARL H) 20 March 1990 (1990-03-20) column 4, line 36 - line 37 column 4, line 53 - line 56 column 5, line 4 - line 9; figures 1-6 ----- -/--	1,3,6-9, 11,24, 41-43

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "S" document member of the same patent family

Date of the actual completion of the international search

30 July 2003

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26.09.03

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INTERNATIONAL SEARCH REPORT

Application No

PCT/GB 03/00874

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 239 363 B1 (WOOTERS TIMOTHY M) 29 May 2001 (2001-05-29) column 5, line 35 - line 45 column 5, line 63 - column 6, line 19 -----	1
A	WO 00 62021 A (SECR DEFENCE ; CRANCH GEOFFREY ALAN (GB)) 19 October 2000 (2000-10-19) cited in the application -----	
A	US 6 118 733 A (AMES GREGORY H) 12 September 2000 (2000-09-12) cited in the application -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/00874

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-29, 41-54

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-29, 41-54

2. claims: 30-40

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/00874

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 6239363	B1	29-05-2001	NONE
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US 6118733	A	12-09-2000	NONE